

QUALITY ASSURANCE ANNUAL REPORT AND WORK PLAN

QUALITY STAFF

FY 2001

Submitted by:

Nancy W. Wentworth,
Director, Quality Staff

November 2001

QUALITY ASSURANCE ANNUAL REPORT AND WORK PLAN

QUALITY STAFF

FY 2001

Submitted by:

Nancy W. Wentworth,
Director, Quality Staff

November 2001

Table of Contents

Page

1.	QUALITY MANAGEMENT RESOURCES	2
1.1	Personnel Resources	2
1.2	Financial Resources	2
1.3	Adequacy of Resources	3
2.	TRAINING	3
2.1	Needs Assessment	3
2.2	QA and QC Courses Provided and Taken	4
2.3	Other Training Information	8
3.	QUALITY SYSTEM-RELATED ACCOMPLISHMENTS	9
3.1	Innovative Practices	9
3.2	Revisions to Quality Management Plan	9
3.3	Technical Assessments	9
3.4	Technical Assistance	14
3.5	QA Guidance	15
3.6	Publications and Presentations	17
3.7	Awards and Recognition	18
3.8	Other QA Management Accomplishments	19
4.	ASSESSMENTS OF QUALITY SYSTEMS	22
5.	PLANNED ACTIVITIES	23
	Appendix A	26

1. QUALITY MANAGEMENT RESOURCES

1.1 Personnel Resources

	FTE	
	Actual FY2001	Projected FY2002
Organization's total filled FTE positions:	17	17
EPA (and other Federal) FTE involved in the management of QA and QC activities:	13.25*	13
EPA (and other Federal) FTE involved in QA and QC technical support activities:	2	2
EPA FTE involved in other non-technical QA and QC support activities:	2	2
Contractor FTE involved in QA and QC support activities:	6.75	6.75

*Additional 0.25 FTE provided by rotational assignment by Agency Intern.

1.2 Financial Resources

	Estimates (\$K)	
	Actual FY2001	Projected FY2002
Extramural Resources (not including internal travel funds or training):	1362	1422
Travel for oversight, surveillance, and audits/assessments:	242	130
Training (including registration fees) and travel for training:	20	18

1.3 Adequacy of Resources

Although the Quality Staff is able to accomplish quite a bit within its budget, the resources allocated to the work of the Quality Staff are sub-optimal. We cannot meet all the QA training, guidance, and assessment needs of the Agency in a timely manner. Furthermore, the work of the Quality Staff is from time-to-time interrupted by higher priorities. For instance, in 2001, the Quality Staff was assigned responsibility for conducting technical systems audits of the National Program Office and Office of Research and Development laboratories. This effort was unanticipated and travel funds were provided, but staff resources to manage and conduct this audit program were reassigned from other Quality Staff activities.

At this point we already anticipate that the work planned by the Quality Staff for FY 2002 is likely to be impacted by the priorities of the Agency's Data and Information Quality Strategic planning effort. Those priorities might include: developing EPA's Information Quality guidelines; developing Information quality GPRA goals/measures, clarifying "the graded approach" as it applies to Information quality; updating grant regulations; updating the grants manual, developing guidance on reporting requirements, developing grant manager and grantee training; reevaluating EPA's quality training approach, and assessing information quality training needs

2. TRAINING

2.1 Needs Assessment

Needs of Quality Staff Members. The training needs of the Quality Staff were developed by the individual staff members and documented in their mandatory Individual Development Plans (IDPs). Staff members then searched out the training they needed and scheduled it to fit into their work load. For instance, one staff member is developing a national database for NELAC and took two short courses, one on relational databases and the other on ORACLE8i, which is the Agency standard software for such large databases. The staff person who handles the quality web site attended a training conference on web development. Others monitored the QA courses that were developed and provided by the Quality Staff.

Agency QA Training Needs. The Quality Staff conducted an assessment of the Quality Systems training needs of the Agency to identify unmet training needs that fall within the scope of the mission of the Quality Staff. This assessment provides a consensus of what training areas are important to our stakeholders. A needs assessment survey was conducted in August 2001. The survey results are currently being evaluated and a training plan will be developed based on that evaluation in this fiscal year.

2.2 QA and QC Courses Provided and Taken

The following chart contains information on training.

QA and QC Courses Provided by the Quality Staff					
Course Title	Supplier	# Attendees		Course Length	Training Needs Fulfilled? <i>If not, indicate why and what you believe needs to be done to satisfy the remaining needs.</i>
		from Org.	from Other Orgs. (identify)		
Interim Quality Policy for Contracts	Quality Staff	4/24 - 1 4/10 - 4 4/2 - 3	4/2/01 - 30 (mostly Regions) 4/6/01 - 25 (mostly ORD) 4/10/01 - 7 4/17/01- 9 (majority Region 8) 4/24/01- 19 (Attendees were Agency QA Managers)	1 hr	Yes in that QA Community informed. However, training needed at staff level (see note under 2.3).
CO Training on Interim Policy for Contracts	Quality Staff & Office of Acquisition Mgt.		All participants from OAM 3/27- 11 3/28 - 8 5/10 am - 12 5/10 pm - 5	2 hrs	Yes. Awareness was raised.
Data Quality Objectives	Quality Staff		Department of Defense Environmental Conservation (DODEC) Conference	half day	Yes
Data Quality Objectives	Quality Staff		3/20 - 25 from US Navy, State of MN, and their contractors	1-day	Yes

QA and QC Courses Provided by the Quality Staff					
Course Title	Supplier	# Attendees		Course Length	Training Needs Fulfilled? <i>If not, indicate why and what you believe needs to be done to satisfy the remaining needs.</i>
		from Org.	from Other Orgs. (identify)		
QA in EPA Grants	Quality Staff		8/22 - 28 EPA Project Officers	1-hr	Yes
Courses offered at the 20 th Annual Conference on Managing Environmental Quality Systems April 2-6, 2001					
Preparation and Review of QA Project Plans	Quality Staff		73	1-day	Yes. Course evaluation indicates that the course objectives were met.
Statistics Refresher Course	Quality Staff		68	half day	Yes. Course evaluation indicates that the course objectives were met.
Data Quality Indicators	Quality Staff		63	half day	Yes. Course evaluation indicates that the course objectives were met.
Introduction to EPA Quality Systems	Quality Staff		60	half day	Yes. Course evaluation indicates that the course objectives were met.

QA and QC Courses Provided by the Quality Staff					
Course Title	Supplier	# Attendees		Course Length	Training Needs Fulfilled? <i>If not, indicate why and what you believe needs to be done to satisfy the remaining needs.</i>
		from Org.	from Other Orgs. (identify)		
Summer Training Conference, August 13-16, 2001 154 total participants (State - 53; Contractor - 8, Universities - 7; other Federal agencies - 8, and EPA - 78)					
Introduction to EPA Quality System Requirements	Quality Staff		80	half day	Yes. Course evaluation indicates that the course objectives were met.
Data Quality Indicators	Quality Staff	1	45	half day	Yes. Course evaluation indicates that the course objectives were met.
Introduction to DQOs	Quality Staff		42	1-day	Yes. Course evaluation indicates that the course objectives were met.
Overview of Quality Management Plan Requirements	Quality Staff		60	half day	Yes. Course evaluation indicates that the course objectives were met.
Train the Trainer	Quality Staff	1	45	half day	Yes. Course evaluation indicates that the course objectives were met.

QA and QC Courses Provided by the Quality Staff					
Course Title	Supplier	# Attendees		Course Length	Training Needs Fulfilled? <i>If not, indicate why and what you believe needs to be done to satisfy the remaining needs.</i>
		from Org.	from Other Orgs. (identify)		
Minimum Detection Limits	Quality Staff		60	half day	Yes. Course evaluation indicates that the course objectives were met.
Quality Assurance Project Plan Workshop	Quality Staff		60	1-day	Yes. Course evaluation indicates that the course objectives were met.
Statistical Concepts for the QA Practitioner	Quality Staff		50	1-day	Yes. Course evaluation indicates that the course objectives were met.
Ethical Conduct in Laboratories (Presented 4 times)	Industry sponsored		75 (total)	1-day	Yes. These courses stressed the importance of Quality Systems and ethical practices in environmental laboratories.

QA and QC Courses Taken by the Quality Staff				
Course Title	Supplier	# Attendees (from Org.)	Course Length	Training Needs Fulfilled? <i>If not, indicate why and what you believe needs to be done to satisfy the remaining needs.</i>
Web Design and Development Conference	Rockhurst University	1	2 days	Temporarily yes, but there is a continuing need to keep current with the technology.
Lotus Notes developers course	WIC	2	4 days	Temporarily yes, but there is a continuing need to keep current with the technology.
Relational Databases: Design Tools and Techniques	Learning Tree	1	4 days	Partially. Staff member needs to progress further up the learning curve to oversee DB development.
Oracle8i: A Comprehensive Hands-On Introduction	Learning Tree	1	5 days	Partially. Staff member needs to progress further up the learning curve to oversee DB development.
Productivity Management	Keane	2	3 days	Not focused on QA exactly. Rather it is QA focused on project management, in particular the need for up-front planning..
Ethical Conduct in Laboratories	Industry sponsored	1	1 day	Yes. These courses stressed the importance of Quality Systems and ethical practices in environmental laboratories.

2.3 Other Training Information

- Training Conferences:** The Quality Staff offers two major Quality Systems training events each year. This includes the Annual Summer Training Conference, and a full day of training at the National Annual Conference on Managing Environmental Quality Systems. The Quality Staff provides training to other Agency organizations on a requested/time available basis.

- **Interim Quality Policy for Contracts.** We developed training materials for the QA community to use in training program staff and distributed CO training course videotapes to the Regions.
- **Training Materials on the web.** We posted training materials for two new courses on our web site (www.epa.gov/quality) this fiscal year: (1) Briefing for Managers on Quality Management Plans and (2) Introduction to Quality Assurance Project Plans Course. Appendix A provides a complete listed of courses for which training materials are posted on the Quality Web Site.
- **Course under development.** Courses on Data Quality Assessment (DQA) (full day), Data Quality Indicators (DQIs) (full day), Minimum Detection Issues (half day), and Statistical Techniques (half day) are under development;

3. QUALITY SYSTEM-RELATED ACCOMPLISHMENTS

3.1 Innovative Practices

Strategic Plan. In September, we released the first-ever strategic plan for the Quality Staff. This Plan is the result of a planning process that took over two years to define not only the Quality Staff's mission and goals, but also our vision for the future and our core values. The Plan will serve as a framework for quality assurance planning and resource allocation decisions for the staff over the next five years.

Tracking Systems. We developed three new Lotus Notes databases to facilitate internal management processes: Quality Staff discussion database; QMP tracking database; and a travel database for Quality Staff travel.

3.2 Revisions to Quality Management Plan

Not Applicable. The Quality Staff's roles and responsibilities are defined in EPA Order 5360.1 A2.

3.3 Technical Assessments

Laboratory Quality Systems Practices were identified as an Agency-level weakness in the FY2000 Federal Managers' Financial Integrity Act. As part of the corrective action strategy, the Deputy Administrator asked the Office of Environmental Information's Quality Staff to coordinate and lead evaluations of the Office of Research and Development and National Program Office laboratories.

Although processes and procedures for conducting technical assessments had been developed for the Agency Regional Laboratory technical assessment effort, many of these were not directly applicable due to the unique nature of the work conducted at Program Office and ORD laboratories.

The Quality Staff team planned and conducted technical assessments of 26 Program Office/ORD laboratory organizations within the space of four months, overcoming many obstacles and developing a quality assessment program that can be used for future assessments.

To ensure consistency in the assessment process, the team developed training for assessors, modular assessment checklists, standard operating procedures, and templates for memoranda, reports, and assessment plans. The greatest challenge that the team faced was determining the scope of the assessment for each organization. Scientific disciplines at each organization were unique, thereby requiring a focused investigation by the team leader. The team tackled this problem by working closely with the laboratory organizations and reviewing laboratory documentation.

The Quality Staff, along with volunteer assessors from across the Agency, completed the on-site technical assessments of the National Program Office and ORD laboratories. Draft assessment reports are expected to be complete by December 2001.

Technical Assessments Performed BY the Quality Staff			
Type	Organization/Project Assessed	Assessor	Dates of Assessment
External	Office of Prevention, Pesticides and Toxics/Office of Pesticide Programs/Biological and Economics Analysis Division/ACB	Frederic Siegelman (lead)	06/25/01
External	Office of Prevention, Pesticides and Toxics/Office of Pesticide Programs/Biological and Economics Analysis Division/APPB	Margo Hunt (lead)	07/09/01
External	Office of Prevention, Pesticides and Toxics/Office of Pesticide Programs/Biological and Economics Analysis Division/ECB	Diann Sims (lead)	08/20/01

Technical Assessments Performed BY the Quality Staff			
Type	Organization/Project Assessed	Assessor	Dates of Assessment
External	Office of Air and Radiation/Office of Transportation and Air Quality	Diann Sims (lead)	07/23/01
External	Office of Air and Radiation/Office of Radiation and Indoor Air/National Air and Radiation Environmental Laboratory	Lisa Doucet (lead)	07/30/01
External	Office of Air and Radiation/Office of Radiation and Indoor Air/Radiation and Indoor Environments National Lab	Lisa Doucet (lead)	09/10/01
External	Office of Water/Office of Ground Water and Drinking Water/Standards and Risk Management Division	Margo Hunt (lead)	08/27/01
External	Office of Research and Development/National Health and Environmental Effects Laboratory/MED	Frederic Siegelman (lead)	07/30/01
External	Office of Research and Development/National Health and Environmental Effects Laboratory/GED	Lisa Doucet (lead)	08/20/01
External	Office of Research and Development/National Health and Environmental Effects Laboratory/Western Ecology Division	Margo Hunt (lead)	10/09/01
External	Office of Research and Development/National Health and Environmental Effects Laboratory/Atlantic Ecology Division	Pat Laforanara (lead)	10/15/01
External	Office of Research and Development/National Health and Environmental Effects Laboratory/Human Studies Division	Frederic Siegelman (lead)	09/24/01

Technical Assessments Performed BY the Quality Staff			
Type	Organization/Project Assessed	Assessor	Dates of Assessment
External	Office of Research and Development/National Health and Environmental Effects Laboratory/ Environmental Toxicology Division	Diann Sims, Frederic Siegelman (leads)	09/24/01
External	Office of Research and Development/National Health and Environmental Effects Laboratory/ Environmental Carcinogenesis Division	Diann Sims, Frederic Siegelman (leads)	09/24/01
External	Office of Research and Development/National Health and Environmental Effects Laboratory/ Reproductive Toxicology Division	Diann Sims, Frederic Siegelman (leads)	09/24/01
External	Office of Research and Development/National Health and Environmental Effects Laboratory/NTD	Diann Sims, Frederic Siegelman (leads)	09/24/01
External	Office of Research and Development/National Exposure Research Laboratory/Microbiological and Chemical Exposure Assessment Research Division	Margo Hunt (lead)	08/27/01
External	Office of Research and Development/National Exposure Research Laboratory/ERL	Diann Sims (lead)	09/03/01
External	Office of Research and Development/National Exposure Research Laboratory/ESD	Lisa Doucet (lead)	09/11/01
External	Office of Research and Development/National Exposure Research Laboratory/HEASD/HERB	Lisa Doucet (lead)	09/12/01

Technical Assessments Performed BY the Quality Staff			
Type	Organization/Project Assessed	Assessor	Dates of Assessment
External	Office of Research and Development/National Exposure Research Laboratory/HEASD	Frederic Siegelman (lead)	09/24/01
External	Office of Research and Development/National Exposure Research Laboratory/Ecological Exposure Research Division	Margo Hunt (lead)	09/24/01
External	Office of Research and Development/National Risk Management Research Laboratory/Subsurface Protection and Remediation Division	Debra Conner (lead)	08/06/01
External	Office of Research and Development/National Risk Management Research Laboratory/Air Pollution Prevention and Control Division	Diann Sims (lead)	09/24/01
External	Office of Research and Development/National Risk Management Research Laboratory/Land Remediation and Pollution Control Division	Margo Hunt (lead)	09/24/01
External	Office of Research and Development/National Risk Management Research Laboratory/Water Supply and Water Resource Division	Margo Hunt (lead)	09/24/01

Technical Assessments Performed ON the Quality Staff				
Type	Organization/Project Assessed	Assessor	Dates of Assessment	Description of assessment results and any corrective actions
none				

3.4 Technical Assistance

Quality Management Plans		
<i>Organization</i>	<i>Status</i>	<i>Date</i>
Office of Transportation and Air Quality	Revised QMP under review	Received Sept. 2001
Office of Criminal Enforcement, Forensics, and Training	Revised QMP under review	Received Sept. 2001
Region 9	Revised QMP under review	Received Sept. 2001
Office of Administration	Revised QMP under review	Received Sept. 2001
Office of Radiation and Indoor Air	Revised QMP under review	Received Sept. 2001
Office of Water	Approved	Sept. 28, 2001
Office of Policy, Economics, and Innovation and the Office of Children's Health Protection	Approved	Nov. 13, 2001
Region 7	Approved	Dec 27, 2000
Office of Information Collection/Office of Technology OP/OIAA	Approved	Feb. 14, 2001
OHROS	Approved	Mar. 5, 2001
Region 6	Approved	Mar. 13, 2001
Office Site Remediation Enforcement	Approved	Apr. 11, 2001
Office of Pesticide Programs	Approved	Apr. 20, 2001
Office of Air Quality Planning and Standards	Approved	Sept.13, 2001

Other Technical Assistance	
<i>Organization</i>	<i>Description</i>
Region 3	Statistical consulting
Region 4	Statistical consulting
Region 5	Statistical consulting
State of Tennessee	Statistical consulting
State of Washington	Statistical consulting
Office of Water	We helped with the OW quality system design and existing data issues for their QMP.

3.5 QA Guidance

3.5.1 Guidance Issued

- We put two documents, *EPA Requirements for Quality Management Plans (QA/R-2)* and *EPA Requirements for Quality Assurance Project Plans (QA/R-5)*, through *Federal Register* notification and review.
- We issued *EPA Requirements for Quality Management Plans (QA/R-2)*, EPA/240/B-01/002, March 2001. This document replaces QAMS 004-80.
- We issued *EPA Requirements for Quality Assurance Project Plans (QA/R-5)*, EPA/240/B-01/003, March 2001. This document replaces QAMS 005-80.
- We issued *Guidance for Developing a Training Program for Quality Systems (QA/G-10)*, EPA/240/B-00/004, December 2000.

- We issued the 5-year update to *Guidance for the Preparation of Standard Operating Procedures (QA/G-6)*, EPA/240/B-01/004, March 2001.

3.5.2 Peer Review Drafts

- We subjected *Guidance for Choosing a Sampling Design for Environmental Data Collection (QA/G-5S)* to peer review.
- We subjected *Decision Error Feasibility Trials (DEFT) Software (QA/G-4D)* to peer review.
- We subjected *Guidance on Environmental Data Verification and Validation (QA/G-8)* to peer review.
- We subjected *Guidance on Data Quality Indicators (QA/G-5i)* to peer review.

3.5.3 Internal Drafts

- We prepared a draft of *Assessing Quality Systems Guidance (QA/G-3)* for review and input.
- Working with the Council on Regulatory Environmental Modeling we developed review drafts of the *Guidance on Quality Assurance Project Plans for Modeling (QA/G-5M)*.
- We developed the internal draft of the *Guidance on Quality Assurance Project Plans for Geospatial Data (QA/G-5G)*.
- We developed an internal draft of the *Guidance on Systematic Planning using Performance & Acceptance Criteria (QA/G-4A)*.
- We developed several internal SOPs:
 - S Developing a product
 - S Peer reviewing a product
 - S Finalizing a product
 - S Travel for non-Quality Staff members

- S Performing a QSA
- S Reviewing a QMP

3.6 Publications and Presentations

- “ISO 19011:2001 - A Combined QMS/EMS Auditing Standard,” North Carolina Quality Conference, Raleigh, NC (October 2000), Gary L. Johnson.
- “Executive Order 13148: Greening of Government Through Environmental Leadership - Overview, ” ASQ 9th Annual ISO 9000 and EED 7th Annual ISO 14000 Conference, Reno, NV (March 2001), Gary L. Johnson.
- “ISO 19011:2002 - Guidelines on Quality and/or Environmental Management Systems Auditing,” ASQ 9th Annual ISO 9000 and EED 7th Annual ISO 14000 Conference, Reno, NV (March 2001), Gary L. Johnson, with T. Ott, J. Stratton, and B. Solomon.
- “ISO 19011:2002 - A Combined Auditing Standard for Quality and Environmental Management Systems,” EPA National Quality Management Conference, St. Louis, MO (April 2001), Gary L. Johnson.
- “Overview of Executive Order 13148: Requirements for Environmental Management Systems at Federal Facilities,” EPA National Quality Management Conference, St. Louis, MO (April 2001), Gary L. Johnson.
- “ISO 19011 - Guidelines on Quality and/or Environmental Management Systems Auditing,” presented to the Raleigh ASQ Section ISO Support Group, Research Triangle Park, NC (May 2001), Gary L. Johnson.
- “ISO 19011:2002 - A Combined Auditing Standard for Quality and Environmental Management Systems,” ASQ Energy and Environmental Division National Conference, Richmond, VA (August 2001), Gary L. Johnson.
- “ISO 19011:2002: the New Auditing Standard for Quality and Environmental Management Systems,” Environmental Innovations Summit, Arlington, VA (September 2001), Gary L. Johnson.
- “How Much Quality is Enough?” Laboratory Data Integrity Training, Las Vegas, Nevada, February 2001. Nancy W. Wentworth.

- “Procurement Quality Requirements at EPA,” U.S. EPA Acquisition Training Conference, Atlanta, Georgia, May 2001. Nancy W. Wentworth.
- “ISO 9000, 10000, 14000 and 19000 Related and Converging,” Academy of Certified Hazardous Materials Managers National Conference, Chicago, Illinois, August 2001. Nancy W. Wentworth.
- “Certification, Quality Systems and Auditing,” Academy of Certified Hazardous Materials Managers National Conference, Chicago, Illinois, August 2001. Nancy W. Wentworth.
- “Keeping it Real - Ensuring Data Quality in Decision Making,” Environmental Monitoring for Public Access and Community Tracking (EMPACT) National Conference, Philadelphia, Pennsylvania, August 2001. Nancy W. Wentworth.
- “Update on Quality Systems at EPA,” Keynote Address, 11th Annual U.S. EPA Region 6 Quality Assurance Conference, Dallas, Texas, September 2001. Nancy W. Wentworth.
- “EPA and ISO,” 11th Annual U.S. EPA Region 6 Quality Assurance Conference, Dallas, Texas, September 2001. Nancy W. Wentworth.

3.7 Awards and Recognition

- Outstanding Service Award, presented by the Energy and Environmental Division of the American Society for Quality (ASQ) to Gary L. Johnson for his service as co-chair of the ASQ ISO 9000/ISO 14000 Conference, March 19-22, 2001, in Reno, Nevada.
- OEI Bronze Award for Commendable Service, presented to Linda Kirkland, as a member of the Geospatial Activities Baseline Assessment Team. The award recognized her efforts to produce the Geospatial Activities Assessment Baseline Report, a comprehensive document detailing the many geospatial activities, organizations, and partnerships at EPA.
- ORD Bronze Medal presented to Nancy W. Wentworth and Vincia C. Holloman for their work on the Peer Review Team. The award was for “uniquely outstanding, dedicated and successful performance in establishing a nationally recognized peer review program that has enhanced the quality of science across the Agency.”

- ORD Bronze Medal presented to Linda Kirkland as a member of the Science Information Management Coordination Board (SIMCorB). The award cited “their role in laying out the vision, structure, and guidelines for Scientific Information Management in ORD.”
- OSWER Bronze Medal awarded to Nancy W. Wentworth and Esperanza Renard for their participation in the Intergovernmental Data Quality Task Force (IDQTF) for outstanding efforts to address environmental data quality vulnerabilities through the development of the Uniform Federal Policy for Implementing Environmental quality Systems.

3.8 Other QA Management Accomplishments

- **ANSI Support.** During FY2001, Gary L. Johnson represented the American National Standards Institute (ANSI) as a U.S. Technical Expert to the ISO Joint Working Group developing ISO 19011, *Guidelines on Quality and/or Environmental Management Systems Auditing*. Johnson represents the U.S. Technical Advisory Group to ISO Technical Committee 207 on Environmental Management which along with ISO TC 176 on Quality Management is developing this international consensus standard. This standard will replace six current standards when it is completed and will be used by EPA and other Federal organizations to audit environmental management systems required at applicable federal facilities by December 31, 2005. Johnson has made significant contributions to the structure and content of the standard in support of U.S. concerns and interests. This work is expected to be completed in late 2002 or early 2003.
- **NELAC/NELAP Support.** We provided organizational and management support to the National Environmental Laboratory Accreditation Program (NELAP). We developed and provided NELAC 101 orientation presentations at several conferences. The Quality Staff also provided NELAC Accrediting Authority Assessor training to state and Federal personnel. We also supported the development of the NELAC National Database, which is scheduled for launch in FY 2002.
- **Guidance Priorities.** We surveyed the EPA quality community and its stakeholders to determine priorities for developing Quality System Guidance.
- **Formatting Guidance.** We developed internal guidelines for formatting the EPA Quality System series of guidance documents.
- **The Quality Web Site.** We expanded the Quality Website (www.epa.gov/quality). The "Tools" pages were redesigned to cover individual topics such as QA Project Plans and systematic planning. We added more resources and examples for each tool. The

Website now complies with Section 508 of the Rehabilitation Act. We revised all PDF files on the Quality website to include bookmarks and hot spots to make the electronic versions more user-friendly.

- **QA Performance Measures.** With contractor support, we conducted a comprehensive evaluation of the information reported to the Quality Staff in the 2000 Quality Assurance Annual Report and Work Plans. The evaluation indicated that the current reports focus on outputs -- numbers of actions taken -- not the outcomes or results of the actions. Work on developing more appropriate performance measures will continue in FY02.
- **Communication.** We fostered communication among members of the QA community by maintaining the QA community list and e-mail groups, developing and using a web notification list – about 250 members – and by sponsoring three monthly conference calls.
- **Work Groups, Teams, and Conferences**
 - S Contracts Management Manual.** We led a workgroup to revise the Contracts Management Manual which removed Section 48 CFR 1546 and, in conjunction with the Office of Acquisition Management, issued interim policy for higher-level quality requirements in contracts (PPN 01-02). The workgroup subsequently conducted an Agency-wide survey to determine the status of quality requirements implementation in EPA’s contracts.
 - S European statistical Commission.** A Quality Staff representative attended the European Statistical Commission on Data Quality.
 - S OEI Tribal strategy work Group.** The Quality Staff participates in the OEI Tribal Strategy Workgroup. This group is developing OEI ‘s strategy on Tribal information issues and processes to ensure appropriate consultation with Tribes on information policies that may affect Tribes.
 - S Records Management.** We participated in the EPA Records Management Application Workgroup to develop the document “Functional Requirements for Electronic Records Management Software Applications” and subsequent work on development of Records Management System Requirements and pilot projects with the Records Management Application Steering Committee.

- S **XML Workgroup.** We participated in the eXtensible Markup Language Laboratory Data Workgroup developing a Superfund Contract Lab Program Pilot for a laboratory data transfer standard and relating such information to other project information for usability.
- S **Geospatial team.** We worked on the OEI-Geospatial Team developing the Geospatial Activities Baseline Assessment and subsequent work on the development of the Geospatial Activities Blueprint.
- S **Model Evaluation Guidance Action Team.** We worked on the Model Evaluation Guidance Action Team developing the “Agency Strategy for the Development of Guidance on Recommended Practices in Environmental Modeling” and we participated in the November 2000 workshop and helped produce its “U.S. EPA Models Evaluation and Peer Review Workshop” Summary Report.
- S **EIMS Architectural Team.** We worked on the Environmental Information Management System (EIMS) architectural team which developed the “EIMS User’s Guide and Data Administration Guidelines.”
- S **Metadata Workgroup.** We participated in the group developing the Agency Metadata Strategy.
- S **Data Quality Workgroup.** We participated in Data Quality workgroup supporting the Quality Subcommittee of the Quality and Information Council (QIC) and led the Graded Approach workgroup and the Data and Information Quality Strategic Plan #6 group.
- S **IDQTF.** We continued work on the Interagency Data Quality Task Force (IDQTF). The goal of this effort is to establish the quality system criteria acceptable to all parts of the Federal Government involved in environmental measurements.
- S **OEI Policy Planning Retreat.** Two Quality Staff representatives attended the OEI Policy Planning Retreat who then served on the follow-up committees.
- S **Information Plan Workgroup.** We participated in the Information Plan Workgroup.

4. ASSESSMENTS OF QUALITY SYSTEMS

Assessments of Quality Systems Performed BY the Quality Staff		
Organization/Project Assessed	Dates	Assessor Organization
EPA Region 10, Seattle	July 9-13, 2001	Quality Staff
U.S. Department of Energy, Rocky Flats Environmental Test Site, Golden, CO	Jan. 29-31, 2001	U.S. DOE, Carlsbad Field Office; U.S. EPA, ORIA and Quality Staff
Office of Pesticide Programs	Dec. 11-15, 2000 Jan. 17-18 2001	Quality Staff
Office of Prevention, Pesticides and Toxics	July 24-26, 2001	Quality Staff
National Center for Environmental Research	Feb 2001	Quality Staff
Region 5	Jan. 29 - Feb. 2, 2001	Quality Staff
Office of Site Remediation Enforcement	10-14 Sept 2001	Quality Staff
Office of Atmospheric Programs	Dec 12-14, 2000	Quality Staff

Assessment of the Quality Staff's Quality System		
Organization/Project Assessed	Dates	Assessor Organization
none		

5. PLANNED ACTIVITIES

- **Training Needs Assessment.** We will conduct a follow-up survey on the summer training later this fiscal year. This information will be used to refine training efforts and materials.
- **Training Conference.** We expect to conduct the annual training conference during the summer of 2002.
- **Training Contract.** A new training contract will be awarded.
- **Annual Meeting.** The 21st Annual National Conference will be held in Phoenix, Arizona, on April 8-11, 2002. This conference is a national forum for disseminating and exchanging information on managing the quality of environmental data; discussion and action on issues of national concern; training; and technical presentations.
- **QAARWPs.** Template for QA Annual Reports and Work Plans will be updated for FY 2002. A workgroup will be established to review the reports on quality system implementation and to develop more useful measures. This activity will be linked with the Agency's Performance Report on GPRA.
- **Documents and Guidance:**
 - S The *Decision Errors Feasibility Trials (DEFT) Software* Windows Version will be issued.
 - S The *Overview of EPA's Quality System* will be released.
 - S Continued development of *Guidance for Developing EPA Quality Systems (QA/G-1)*.
 - S *Guidance on the Management Systems Review Process (QA/G-3MSR)* will be subjected to peer review.
 - S *Guidance on EPA's Quality System Audits (QA/G-3Q)* will be subjected to peer review.
 - S *Guidance on Systematic Planning Using Performance and Acceptance Criteria (QA/G-4A)* will be subjected to peer review.
 - S The update of *Guidance on Quality Assurance Project Plans (QA/G-5)* will be subjected to peer review.
 - S *Guidance for Geospatial Data Quality Assurance Project Plans QA/G-5G* will be subjected to peer review.
 - S *Guidance on Data Quality Indicators (QA/G-5i)* will be released.
 - S *Guidance on Quality Assurance Project Plans for Modeling (QA/G-5M)* will be subjected to peer review.
 - S *Guidance for Choosing a Sampling Design for Environmental Data Collection (QA/G-5S)* will be released.

- S Development of *Guidance on Conducting Surveillance of Environmental Data Operations (QA/G-7S)* will continue.
 - S *Guidance on Environmental Data Verification and Validation (QA/G-8)* will be released.
 - S The *Data Quality Evaluation Statistical Toolbox (DataQUEST) (QA/G-9)* will be subjected to peer review.
 - S *Guidance for Environmental Technology Design, Construction, and Operation (QA/G-11)* will be subjected to peer review.
 - S We anticipate issuing several quality system fact sheets.
- **Strategic Planning.** A strategic planning meeting for Quality Staff will be implemented to review and update the Quality Staff strategy based on revisions to the Quality Staff responsibilities.
 - **QMP review.** We anticipate reviewing 12 Quality Management Plans (QMPs).
 - **Laboratory Quality Systems Activities.** The Quality Staff will continue to participate in the National Environmental Laboratory Accreditation Conference's Quality System Committee. We will complete the reports on the technical system audits of the Agency's Program Office and research Laboratories. In addition we will host a workshop of Agency laboratory and laboratory assessment experts to gather input on best practices in laboratory ethics and quality systems. This information will be used to prepare training material for laboratory assessors on indicators of systems vulnerabilities that could lead to unethical conduct when analytical systems are out of control.
 - **Management Assessments.** Management assessments are proposed for the following EPA organizations and programs:
 - S Region 3, Philadelphia
 - S Region 6, Dallas
 - S Region 8, Denver
 - S Office of Underground Storage Tanks
 - S Office of Regulatory Enforcement
 - S Office of Compliance
 - S Office of Solid Waste
 - S Superfund Remedial Program

- S Superfund Removal/Emergency Response Program
- S Office of Research and Development/National Health and Environmental Effects Research Laboratory
- S Office of Research and Development/National Center for Environmental Assessments
- S Office of Environmental Information

- S **OEI Workgroups.** We anticipate continuing participation in OEI workgroups focusing on the web development and on the Agency Data and Information Quality Strategic Plan.

Appendix A

**A complete list of the courses
for which we have posted training materials
on our Web Site (www.epa.gov/quality)**

INTRODUCTION TO DATA QUALITY OBJECTIVES

This one-day course teaches participants the basic elements of the Data Quality Objectives (DQO) Process. In the first part of the course, the participants learn about the Agency's Quality System and the elements of the DQO Process, how the process applies to a regulatory program at EPA, and how to interpret the consequences of potential decision errors. In the latter half of the course, participants are divided into groups and work together as teams to apply the process to some real-life examples.

INTRODUCTION TO QA PROJECT PLANS

This one-day course is designed with a "how-to" approach for individuals who write, review, and/or approve QA Project Plans. It provides an overview of QA Project Plan development which stresses the need for systematic planning and EPA's graded approach to project plan development, and describes in detail, the twenty-four elements of the QA Project Plan. Participants are expected to have some basic experience in quality assurance.

INTRODUCTION TO QUALITY MANAGEMENT PLANS

This half-day course is intended to introduce the EPA requirements and specifications of Quality Management Plans. This course presents information to be used in writing a Quality Management Plan that meets the requirements of EPA Order 5360.1 and EPA Requirements for Quality Management Plans (QA/R-2). Participants receive instruction in how to address each element of the specifications and documentation requirements. Participants are taught how to describe their organization's approach to each element of the requirement and to identify the documentation required to develop a Quality Management Plan.

INTRODUCTION TO EPA QUALITY SYSTEM REQUIREMENTS - Updated November 22, 2000

This one-day course is intended to introduce the concepts of QA to analysts having little or no experience in the field. The course contains an overview of the Agency's Quality System, an overview of basic QA concepts, and a description of the application of these concepts to environmental programs involving the collection or use of environmental data. Topics covered include terms and nomenclature, roles and responsibilities, and principal QA activities. Optional Activities for this course include an example Quality Management Plan, an example Quality Assurance Project Plan, and the Orientation to EPA Quality System Requirements Video. EPA organizations may request this video from the Quality Staff at (202) 564-6830.

OVERVIEW OF THE EPA QUALITY SYSTEM - File corrected March 14, 2001

This is an abbreviated version of the Introduction to the EPA Quality System Requirements course that focuses on the requirements of the EPA Quality System. This course describes the EPA Quality System and the specific elements that managers and project personnel must address to comply with EPA policy.

QUALITY MANAGEMENT PLAN BRIEFING

This one-hour briefing contains presentation materials and a fact sheet and can be used to educate managers on EPA's requirements for Quality Management Plans.